1. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4 - 7x \leq \frac{-60x + 3}{9} < 9 - 8x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [10.5, 18.75]$ and $b \in [-7.5, -6]$

B. $(-\infty, a) \cup [b, \infty)$, where $a \in [9, 15]$ and $b \in [-7.5, -4.5]$

C. $(a, b]$, where $a \in [10.5, 13.5]$ and $b \in [-7.5, -6]$

D. $[a, b)$, where $a \in [8.25, 14.25]$ and $b \in [-8.25, -3.75]$

E. None of the above.

2. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{3}{2} - \frac{7}{4}x \geq \frac{6}{6}x - \frac{9}{7}$$

A. $[a, \infty)$, where $a \in [-2.25, 0]$

B. $(-\infty, a]$, where $a \in [0, 3.75]$

C. $[a, \infty)$, where $a \in [-0.75, 2.25]$

D. $(-\infty, a]$, where $a \in [-2.25, 0]$

E. None of the above.

3. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-10}{5} - \frac{4}{9}x > \frac{-3}{3}x - \frac{8}{7}$$

A. $(-\infty, a)$, where $a \in [0, 4.5]$

B. (a, ∞), where $a \in [0.75, 3.75]$

C. $(-\infty, a)$, where $a \in [-2.25, 0.75]$

D. (a, ∞), where $a \in [-5.25, 0]$

E. None of the above.

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4. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 8 units from the number 5.

A. $(-\infty, -3) \cup (13, \infty)$

B. $(-\infty, -3] \cup [13, \infty)$

C. $(-3, 13)$

D. $[-3, 13]$

E. None of the above

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5. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$5 + 6x > 8x \text{ or } 9 + 8x < 9x$$

A. $(-\infty, a] \cup [b, \infty),$ where $a \in [-0.75, 6]$ and $b \in [6, 9.75]$

B. $(-\infty, a) \cup (b, \infty),$ where $a \in [-10.5, -8.25]$ and $b \in [-4.5, 0]$

C. $(-\infty, a) \cup (b, \infty),$ where $a \in [-0.75, 3]$ and $b \in [4.5, 9.75]$

D. $(-\infty, a] \cup [b, \infty),$ where $a \in [-10.5, -6]$ and $b \in [-5.25, -1.5]$

E. $(-\infty, \infty)$

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6. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 6 units from the number -7.

A. $(-\infty, -13) \cup (-1, \infty)$

B. $(-13, -1)$

C. $[-13, -1]$

    D. $(-\infty, -13] \cup [-1, \infty)$

    E. None of the above

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7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-6 + 3x \leq \frac{12x - 6}{3} < 9 - 4x$$

    A. $[a, b)$, where $a \in [-10.5, 3.75]$ and $b \in [0, 5.25]$

    B. $(a, b]$, where $a \in [-6.75, -2.25]$ and $b \in [0.75, 4.5]$

    C. $(-\infty, a] \cup (b, \infty)$, where $a \in [-7.5, 2.25]$ and $b \in [0, 5.25]$

    D. $(-\infty, a) \cup [b, \infty)$, where $a \in [-5.25, -1.5]$ and $b \in [0.97, 1.95]$

    E. None of the above.

---

8. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$5x - 4 \leq 10x - 6$$

    A. $(-\infty, a]$, where $a \in [-0.66, 0.16]$

    B. $[a, \infty)$, where $a \in [0.16, 1.52]$

    C. $[a, \infty)$, where $a \in [-1.1, -0.18]$

    D. $(-\infty, a]$, where $a \in [0.27, 2.08]$

    E. None of the above.

---

9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$8x + 8 \geq 10x - 10$$

    A. $(-\infty, a]$, where $a \in [-14, -3]$

B. $[a, \infty)$, where $a \in [-9, -4]$

C. $(-\infty, a]$, where $a \in [9, 10]$

D. $[a, \infty)$, where $a \in [8, 10]$

E. None of the above.

10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-6 + 9x > 12x \text{ or } 6 + 5x < 7x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.6, -2.62]$ and $b \in [1.3, 2.5]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.56, -1.27]$ and $b \in [2.85, 3.9]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.7, -1.57]$ and $b \in [2.39, 4.02]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3.4, -2.6]$ and $b \in [0.53, 2.55]$

E. $(-\infty, \infty)$

11. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 + 9x < \frac{30x - 8}{3} \leq -9 + 6x$$

A. $(a, b]$, where $a \in [-7.5, -3.75]$ and $b \in [-6, 1.5]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [-9.75, -1.5]$ and $b \in [-8.25, -0.75]$

C. $[a, b)$, where $a \in [-6.75, -4.5]$ and $b \in [-3, 0]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [-6, -3.75]$ and $b \in [-4.5, -0.75]$

E. None of the above.

12. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{9}{2} - \frac{5}{4}x \geq \frac{-4}{8}x - \frac{5}{9}$$

A. $(-\infty, a]$, where $a \in [6, 8.25]$

B. $(-\infty, a]$, where $a \in [-10.5, -3.75]$

C. $[a, \infty)$, where $a \in [6, 8.25]$

D. $[a, \infty)$, where $a \in [-8.25, -5.25]$

E. None of the above.

---

13. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{7}{6} - \frac{5}{7}x < \frac{7}{9}x - \frac{3}{5}$$

A. $(-\infty, a)$, where $a \in [-4.5, 0.75]$

B. $(-\infty, a)$, where $a \in [0.75, 3]$

C. (a, ∞), where $a \in [0, 3.75]$

D. (a, ∞), where $a \in [-3, -0.75]$

E. None of the above.

---

14. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 8 units from the number -4.

A. $(-12, 4)$

B. $(-\infty, -12) \cup (4, \infty)$

C. $(-\infty, -12] \cup [4, \infty)$

D. $[-12, 4]$

E. None of the above

15. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9 + 3x > 5x \text{ or } 3 + 9x < 12x$$

A. $(-\infty, a] \cup [b, \infty),$ where $a \in [-5.25, -3]$ and $b \in [-6, 3]$

B. $(-\infty, a] \cup [b, \infty),$ where $a \in [-1.5, 3.75]$ and $b \in [3.75, 7.5]$

C. $(-\infty, a) \cup (b, \infty),$ where $a \in [-5.62, -3.82]$ and $b \in [-1.5, 1.5]$

D. $(-\infty, a) \cup (b, \infty),$ where $a \in [-3.9, -0.6]$ and $b \in [2.25, 6]$

E. $(-\infty, \infty)$

---

16. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 9 units from the number 1.

A. $(-\infty, -8) \cup (10, \infty)$

B. $(-\infty, -8] \cup [10, \infty)$

C. $[-8, 10]$

D. $(-8, 10)$

E. None of the above

---

17. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 - 4x \le \frac{-21x + 7}{6} < -9 - 9x$$

A. $[a, b),$ where $a \in [17.25, 21]$ and $b \in [0.67, 5.7]$

B. $(-\infty, a) \cup [b, \infty),$ where $a \in [14.25, 21.75]$ and $b \in [0, 4.5]$

C. $(a, b],$ where $a \in [14.25, 19.5]$ and $b \in [0, 3]$

D. $(-\infty, a] \cup (b, \infty),$ where $a \in [17.25, 19.5]$ and $b \in [0, 4.5]$

E. None of the above.

---

18. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$4x - 4 < 5x + 3$$

A. (a, ∞), where $a \in [-7, -1]$

B. $(-\infty, a)$, where $a \in [5, 10]$

C. $(-\infty, a)$, where $a \in [-7, -3]$

D. (a, ∞), where $a \in [4, 10]$

E. None of the above.

---

19. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$7x + 8 \leq 10x + 7$$

A. $(-\infty, a]$, where $a \in [-0.6, -0.1]$

B. $[a, \infty)$, where $a \in [-0.75, 0.22]$

C. $(-\infty, a]$, where $a \in [-0.3, 1.5]$

D. $[a, \infty)$, where $a \in [-0.14, 0.86]$

E. None of the above.

---

20. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 + 9x > 11x \text{ or } 8 + 6x < 7x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-6, -0.75]$ and $b \in [3, 10.5]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-10.5, -3]$ and $b \in [-1.5, 3]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9, -6.75]$ and $b \in [0, 2.25]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6, -0.75]$ and $b \in [3.75, 9.75]$

E. $(-\infty, \infty)$

---

21. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 + 5x \le \frac{20x - 4}{3} < 7 + 3x$$

A. $(a, b]$, where $a \in [0.75, 9]$ and $b \in [-3.75, -1.5]$

B. $[a, b)$, where $a \in [-2.25, 6.75]$ and $b \in [-5.25, -0.75]$

C. $(-\infty, a] \cup (b, \infty)$, where $a \in [0.75, 6]$ and $b \in [-5.25, -0.75]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [3, 4.5]$ and $b \in [-8.25, -0.75]$

E. None of the above.

---

22. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{8}{7} - \frac{10}{9}x \ge \frac{-8}{5}x - \frac{10}{3}$$

A. $(-\infty, a]$, where $a \in [7.5, 9.75]$

B. $[a, \infty)$, where $a \in [7.5, 15]$

C. $[a, \infty)$, where $a \in [-12, -8.25]$

D. $(-\infty, a]$, where $a \in [-12, -4.5]$

E. None of the above.

---

23. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{9}{3} - \frac{5}{9}x \ge \frac{3}{8}x + \frac{4}{4}$$

A. $(-\infty, a]$, where $a \in [1.5, 6]$

B. $[a, \infty)$, where $a \in [-1.5, 5.25]$

C. $[a, \infty)$, where $a \in [-7.5, -1.5]$

D. $(-\infty, a]$, where $a \in [-5.25, 0]$

E. None of the above.

24. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 3 units from the number -3.

A. $(-\infty, -6) \cup (0, \infty)$

B. $(-\infty, -6] \cup [0, \infty)$

C. $[-6, 0]$

D. $(-6, 0)$

E. None of the above

25. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 + 7x > 9x \text{ or } -5 + 8x < 11x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-5.25, -3.75]$ and $b \in [-4.5, 0]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [0, 2.25]$ and $b \in [0.75, 6.75]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.25, 4.5]$ and $b \in [-0.75, 9.75]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.5, 0]$ and $b \in [-6.75, 2.25]$

E. $(-\infty, \infty)$

26. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

Less than 9 units from the number 4.

A. $(-\infty, -5] \cup [13, \infty)$

B. $(-\infty, -5) \cup (13, \infty)$

C. $(-5, 13)$

D. $[-5, 13]$

E. None of the above

---

27. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$8 - 4x \leq \frac{23x - 6}{7} < 9 + 3x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [0, 1.5]$ and $b \in [33, 40.5]$

B. $(-\infty, a) \cup [b, \infty)$, where $a \in [0, 4.5]$ and $b \in [33, 39]$

C. $(a, b]$, where $a \in [0, 3.75]$ and $b \in [32.25, 35.25]$

D. $[a, b)$, where $a \in [0.97, 2.77]$ and $b \in [33.75, 36.75]$

E. None of the above.

---

28. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3x - 8 \leq 9x + 7$$

A. $(-\infty, a]$, where $a \in [-2.25, 0.75]$

B. $[a, \infty)$, where $a \in [-2.6, 0.3]$

C. $(-\infty, a]$, where $a \in [0.25, 2.25]$

D. $[a, \infty)$, where $a \in [-0.1, 1.5]$

E. None of the above.

---

29. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4x + 3 > 3x - 5$$

A. (a, ∞), where $a \in [-6.2, 1.1]$

B. $(-\infty, a)$, where $a \in [0.14, 3.14]$

C. (a, ∞), where $a \in [-0.7, 3.1]$

D. $(-\infty, a)$, where $a \in [-9.14, -0.14]$

E. None of the above.

30. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4 + 9x > 11x \text{ or } 5 + 7x < 8x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.35, -3.3]$ and $b \in [-0.75, 4.5]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.75, 4.5]$ and $b \in [4.5, 9]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.92, -0.45]$ and $b \in [4.5, 6]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-11.25, -3.75]$ and $b \in [-0.75, 3]$

E. $(-\infty, \infty)$